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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,750

01/08/2007

Tilman Haug

3926.258

6875

41288

7590

02/18/2010

PATENT CENTRAL LLC

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EXAMINER

EASTMAN, AARON ROBERT

ART UNIT

PAPER NUMBER

3745

MAIL DATE

DELIVERY MODE

02/18/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,750

Applicant(s)

HAUG ET AL.

Examiner

Aaron R. Eastman

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date 07/17/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 7, 8 and 10 are objected to because of the following informalities: In each of claims 7, 8 and 10, "Claim" should read --claim--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 6, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 6,234,749 (Hasegawa et al. hereinafter).
4. In re claim 6 Hasegawa et al. disclose a turbo-machine (1), including:
a stator (20, 23), internally coated with a running-in layer (34),
a rotor (10) within the stator (20, 23), and
a device for parallel displacement and rotation of the rotation axis of the rotor about the axis of symmetry of the stator (col. 5 lines 51-67).
5. In re claim 9 Hasegawa et al. disclose a process for adapting stator (20, 23) and rotor (10) of a turbo-machine (1), wherein a running-in layer (34) is applied upon the stator (20, 23) and this running-in layer (34) is at least partially worn away or abraded by the rotor (10), wherein the rotor (10) is rotated about a rotation axis displaced parallel to the axis of symmetry of the stator (col. 5 lines 3-20 and 51-67).

6. In re claim 10 Hasegawa et al. disclose a process according to claim 9, wherein the rotor (10) is introduced rotatingly into the stator.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. in view of USP 6,290,455 (Hemmelgarn et al. hereinafter) and USP 6,203,021 (Wolfla et al. hereinafter).

9. In re claims 7 and 8 Hasegawa et al. disclose all of the limitations except for wherein the rotor blades of the rotor contain aluminum based alloys or iron based alloys or cobalt based alloys or nickel based alloys and the stator contains aluminum based alloys or cast steel (claim 7) and wherein the running-in layer contains A1Si12 or NiCrAl1 (claim 8).

10. Hemmelgarn et al. teach an aluminum alloy casing (stator) (col. 5 lines 1-2) and Wolfla et al. teach gas turbine engine components (this includes rotor blades) of iron, cobalt or nickel based alloys (col. 2 lines 64-66) as well as an abradable layer (running-in layer) of a NiCrAl alloy (col. 2 line 66 - col. 3 line 5).

11. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Hasegawa et al. by forming the stator of an aluminum alloy as taught in Hemmelgarn et al. for the purposes of reducing overall

weight and by forming the rotor blades of an iron, cobalt or nickel based alloy and forming the running-in layer of a NiCrAl alloy as taught in Wolfla et al. for the purposes of using a well known material with predictable results and making the running-in layer more erosion resistant.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP's 4291089, 4374173, 4867639, 5185217, 5196471, 5434210, 5530050, 6382905, 6547522 and 6619913 all disclose an abradable coating. USP 3771927 discloses a rotor subject to parallel displacement.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron R. Eastman whose telephone number is (571)270-3132. The examiner can normally be reached on Mon-Thu 9:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron R. Eastman/
Examiner, Art Unit 3745

/Edward K. Look/
Supervisory Patent Examiner, Art Unit 3745